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U.S. Department of Agriculture

Hardy Nut Trees

J. F. Jones
NUT TREE SPECIALIST
Lancaster,
Penna.

FOREWORD

I have not made any general change in the make-up of my little nut catalogue or given as much space to it as I would like to do, because printing and engraving is much higher than formerly and are a considerable item of expense with me. Also, my stock of nut trees, being considerably reduced, can be easily sold without any extensive selling campaign.

I have, however, added four more pages and a number of new illustrations made direct from photographs taken here and I hope these prove of interest and helpful to those wanting to plant nut trees but who have been undecided as to what to plant. With thousands of my budded and grafted trees coming into bearing all over the country the past few years interest in nut culture has increased by leaps and bounds. I had many visitors here the past two seasons and they went away seemingly much impressed with the bearing English and black walnut, pecan, shagbark, heart nut, filberts and hazels.

I wish to thank my customers and friends for past favors and solicit your future orders with the assurance that they will receive the same careful attention that they have in the past.

TERMS AND SUGGESTIONS

VISITORS. I am always glad to welcome visitors who are interested in nut trees. The best time to see the trees in bearing is in the late summer. English walnuts and filberts ripen early in September. Black walnuts, shagbarks and pecans ripen in October. The Quarryville and Strasburg Trolley cars leaving Lancaster every half hour pass the nurseries.

MY NURSERIES ARE LOCATED three miles south of Lancaster in a section noted for its fine farms and productive soil. We have the main lines of the Pennsylvania and Reading railroads which insures the prompt delivery of shipments at nominal rates.

WHEN TO PLANT. My hardy Pennsylvania Grown Trees may be planted either spring or fall. Trees may be planted any time they are dormant, (which is from October 1st to June 1st here) and the ground is not frozen hard. The usual shipping season is October 1st to December 20th in the fall and March 1st to June 1st in the spring. I can usually supply trees perfectly dormant out of my cellars, however, till June 15th to 20th.

REMITTANCES may be made in any way that is convenient. Personal checks from responsible parties accepted at par.

NON-GUARANTY. I guarantee all trees sent out to be of the size and quality specified, but like most other firms I do not guarantee trees to grow. I take this stand for the following reasons: In the first place, many people who plant trees guaranteed to grow, habitually neglect the trees for this very reason and never get any where. In the second place, the prices of the trees would have to be advanced to take care of the losses thus caused by careless planting and neglect, and this would not be fair to the man who plants and cares for his trees properly, since he would be helping to pay these unnecessary losses in which he had no part. I take extra pains to see that all trees sent out are well grown, true to label and in condition to live and grow, but since I have no influence over conditions surrounding the trees or over their planting and care, after they pass out of my hands, I can not assume responsibility for any customers losses resulting from failure to make the trees grow for any reason. Where customers receive trees from me that they feel are not up to my usual high standard, I will take it as a favor if they write me fully in the case and I am always glad to make good mistakes of any kind, but complaints or claims, to receive attention, must be made as soon as shipment has been received and inspected. Otherwise the transaction will be considered as closed and my books closed against it, and no claims thereafter will be entertained.

CORRESPONDENCE. I am always glad to give any one interested in nut trees any additional information that I can by correspondence, but I often get long letters from people asking many questions that are fully covered in my printed matter. Too often those writing these long letters do so simply from force of habit and are not really interested. The grafted and budded nut trees going out now have cost so much to grow that I have had to cut over-head expense to the minimum, and being a very busy man, I will thank those writing me to first read my printed matter carefully.

MY METHOD OF PACKING is far superior to that used generally in packing nursery stock and insures the delivery of trees in good condition to the most distant points. I have shipped trees to such remote countries as British South Africa and China, as well as all over the U. S. and have received many complimentary letters on the condition of the trees on arrival.

TREES PACKED FOR PARCEL POST are packed light, yet well protected from drying out by re-inforced, air-tight paper, and small shipments up to 300 miles can usually be sent cheaper in this way than by express. Unless the trees are cut back, however, we can not send trees larger than 2 to 3 feet Parcel Post. The postage on Parcel Post shipments is charged for when shipment is made where it is not sent with the order.

Future Crops Will Be Tree Crops

"Tree Crops" will be the slogan of the future, and the most important of these by far, are the nut bearing trees. The apple, peach and other soft fruits are good to eat to be sure, but they have little actual food value in comparison to nuts. Nuts are the most concentrated and complete natural food product known to man and require no preparation whatever, being ready to serve as the kernels come from the shell, or they may be combined with other food elements and made up into various attractive and delicious foods. Since nuts are very rich and have a high protein and fat content, they are admirably adapted to use with other foods, the most of which are deficient in these elements, and fit in well in almost any food combination.

DISTANCE FOR PLANTING. Pecans and black walnuts 50 to 60 feet apart; English walnuts 40 to 50 feet apart; filberts and almonds, 15 to 20 feet apart. Shagbarks 40 feet apart; persimmon 20 to 25 feet apart.

Pecans, English and black walnuts do not need all of the room given them for 12 or 15 years, and fillers of smaller growing nut or fruit trees may be planted between them to good advantage; also any cultivated farm or garden crop may be planted between the trees, as they are little in the way of cultivation for several years.

The Demand for Nuts

The production of nuts has not kept pace with consumption in this country and the demand very greatly exceeds the supply. If the supply of common wild nuts that go to make up the bulk of our supply at the present time were of fine budded or grafted sorts, consumption of nuts would be twenty times as great as it is today, provided, of course the supply was available, and at a reasonable price.

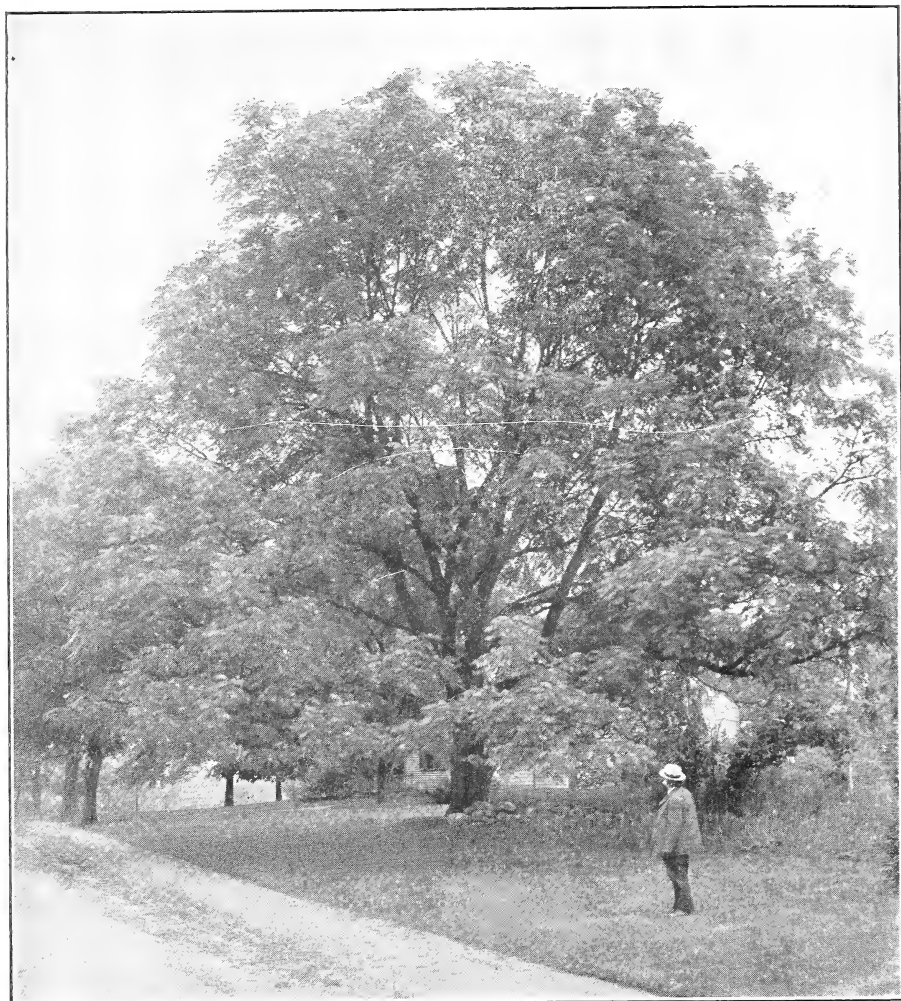
Importation of nuts into the U. S. increased from \$8,549,997.00 in 1909, to \$58,752,801.00 in 1920, as the following statistics show.

Value of nuts imported into the United States from 1909 to 1920 inclusive compiled by the Federal Department of Statistics:

1909	1910	1911	1912	1913	1914
\$ 8,549,997	\$12,775,196	\$14,265,572	\$15,626,485	\$13,508,307	\$19,815,711
1915	1916	1917	1918	1919	1920
\$16,865,244	\$20,594,434	\$33,667,681	\$49,930,283	\$57,499,040	\$58,752,801

Important Information

The propagation of nut trees is a highly specialized work and one that must be learned from the "ground up" if one is to succeed. These trees can not be propagated by ordinary methods as employed in the propagation of fruit trees, and even with the methods that I have perfected, results are always uncertain and not infrequently disappointinging. The general nurserymen are not therefore propagating nut trees by budding or grafting and can hardly be expected to do so.



A fine specimen of the Black Walnut growing in Mass.

Facilities for Growing Nut Trees

I have gathered together here the largest and most valuable collection of new and rare varieties of nuts to be found. Owing to the difficulties encountered in the propagation of nut trees and especially in grafting with scions from old, bearing trees, working up Mother Blocks and stocks of trees is slow and expensive. My Mother Blocks, having been grafted direct from the original trees, have taken considerable time and expense to build up, but taking scions for propagation from these first generation, pedigreed trees, insures both the genuineness of the varieties and early and prolific bearing of the trees. My soil and climatic conditions here are very favorable for the growing of this class of stock and I get here a very stocky tree with a well matured and well ripened wood growth that may be safely planted anywhere that nuts can be grown.

Growing Nut Trees with Superior Roots

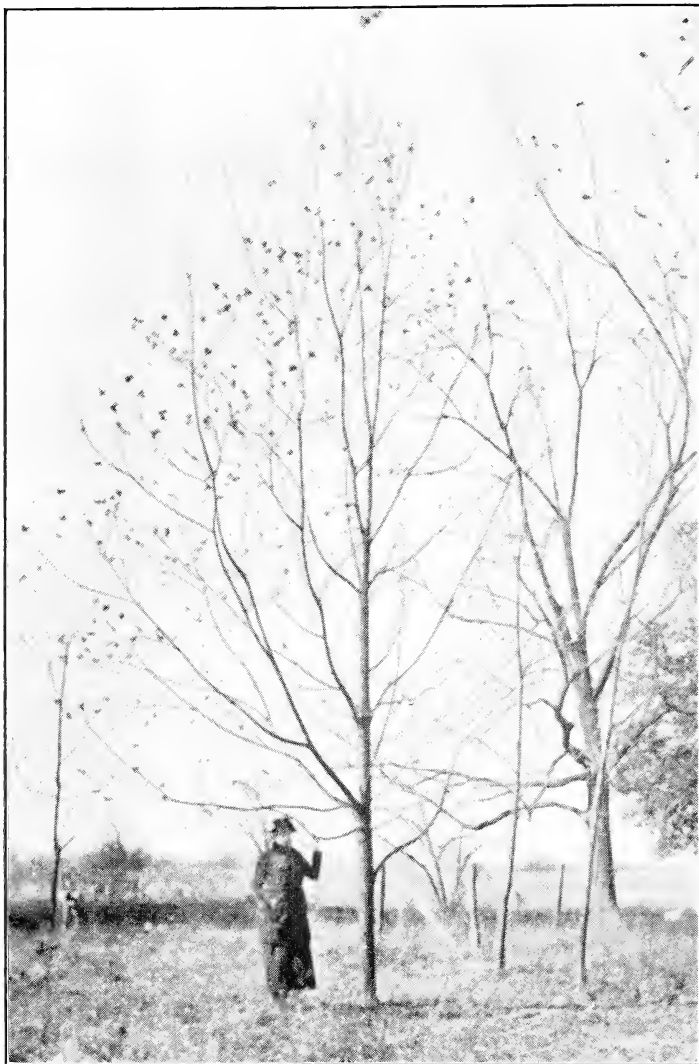
Although conditions here are very favorable for both root and top development, we greatly improve the root system by an improved method of transplanting the young trees. These trees, as I grow them, have more compact and much better root systems. This adds considerably to the cost of the trees but is necessary if the trees are to be transplanted successfully later on. Such trees are not obtainable elsewhere.

Plant Only Budded or Grafted Trees

I am sometimes asked what are the advantages of budded or grafted trees over seedlings. The difference is the same as with fruit trees. Varieties of either fruit or nuts can only be perpetuated by budding or grafting. If we want a Baldwin apple orchard we do not attempt to grow the trees by planting Baldwin apple seed, because we know that these seedlings will not hold true to type or variety, and that fruit of all sizes, shapes and colors will be produced when the trees come into bearing. We also know that these seedling trees will vary as much in vigor and productiveness, as in the fruit borne, and that they will take two or three times as long to come into bearing as do the grafted or budded trees. The same applies to nuts and it would be just as reasonable to plant a seedling apple orchard as to plant a seedling nut orchard. The only difference is, grafted varieties of nuts have not been available till recent years and people have become accustomed to planting seedling trees. By growing grafted or budded trees of improved varieties of nuts, we put nut culture on the same plane with fruit growing and there is nothing in the orchard line that promises greater returns to the orchardist than the planting of these improved budded and grafted varieties.



One of my English Walnut Trees eight years old on the famous Grand View Poultry Farms, Aurora, N. Y. Be sure to read Mr. Wyckoffs' letter on page 22.

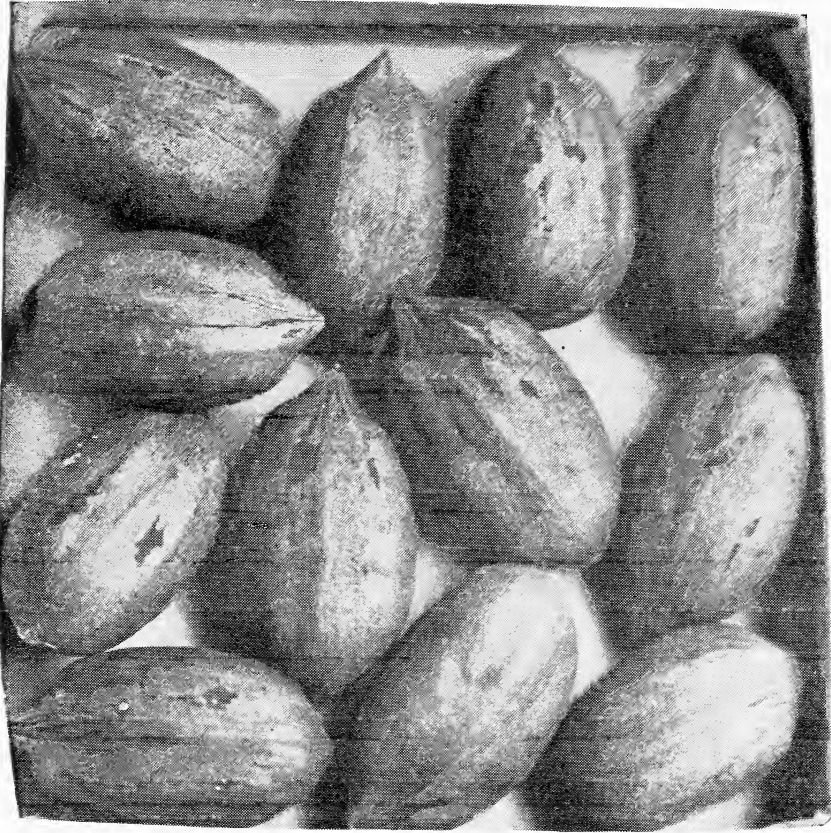


From photo of a 7-year grafted Pecan tree bearing its 5th crop of 14 lbs. on the grounds of Mr. J. F. Wilkinson, Rockport, Ind. Some of these Pecans, as grown by Mr. Wilkinson, shown on next page.

Hardiness of Nut Trees

I grow only hardy, northern varieties of nut trees. All trees offered are grown here in my Pennsylvania Nurseries and are perfectly hardy and reliable.

The extreme cold winter of 1917-18 was a severe test, but I did not lose any trees from frost and none had any protection whatever. Spring, 1918, many reports came in from customers expressing surprise and satisfaction with the hardiness of my hardy budded and grafted trees. Several customers in Michigan and New York reported that their English walnut trees from here went through the winter in good condition while apple trees suffered badly, many orchards being killed.



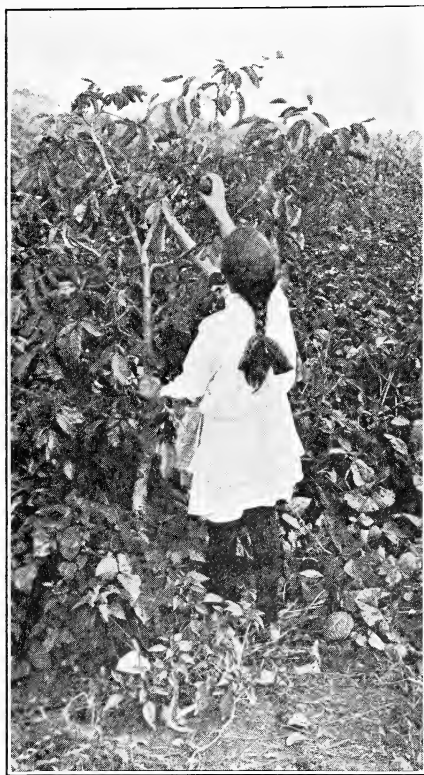
Northern Pecans as grown by Mr. Wilkinson. See preceding page.

Ornamental Value of Nut Trees

It seems hard for some people to get away from the idea that they must plant maples, poplars or other worthless trees simply because others are planting them, when nut trees are far more ornamental; make just as good shade trees, and in addition produce a bountiful supply of nuts for home use if trees of good budded or grafted varieties are planted.

What constitutes an ornamental tree? The two factors of prime importance, and which the landscape architect looks to especially, are beauty and rarity. He is willing to sacrifice much on the former, if a specimen is rare. If one goes into a well planted place, the trees and shrubs one sees every day are hardly noticed, but new or rare specimens attract one's attention at once. A lawn or home grounds planted with nut trees, will attract more attention than any other planting that can be made. The early bearing of the grafted trees enhances their attractiveness as well as their usefulness.

Shrubby or herbaceous plants can be planted between or around the nut trees the same as with other trees. These trees, being very deep rooted, will not suffer because of being near the shrubbery, provided the soil is fertile, and the shrubbery will do better near these trees than they will when planted near ordinary shade trees which root shallow and spread their roots over a wide area.



Gathering English Walnuts from a two-year tree in my test orchard.

Age of Bearing

One of the big advantages of budded or grafted nut trees over seedlings is their early bearing habit. Generally speaking, the budded or grafted trees begin bearing in one-third of the time required for seedling trees. We often have the improved English and black walnut trees to bear the third year and sometimes the second, and they may be counted upon to begin bearing nicely by the fifth year. The heart nut bears even younger, and it is not uncommon for these trees to bear a few nuts the second year.

The grafted pecan trees are no exception to the rule and bear in one-third of the time required for seedling trees. Visitors here the past fall, many of whom have been closely allied with the northern nut industry, expressed surprise at both the quality and the quantity of nuts borne on the young trees in my test orchard.

The hybrid hickories have proven early bearers and heavy croppers, exceeding my own estimates of them made earlier. These trees, like the pecan, are of rapid growth and quickly make trees large enough to bear profitable crops.

The Supply and Prices of Trees

As announced several years ago, my yearly plantings of nuts and nut stocks was greatly reduced due to the difficulty of getting labor and to other difficulties encountered in growing and selling these trees under "After-the-War" conditions. Digging the deep rooted nut trees is very slow and laborious work and men do not like to do it. This has weighed heavily against us in getting labor even at a high wage. As a result of this retrenchment policy, my supply of trees, while of better quality, is much smaller than formerly and, with the increased retail demand, the supply of most trees is entirely inadequate and will not go around. The only trees that I have any large stock of at this time are pecans. This is due to having a large stock of young seedlings of these on hand when the retrenchment policy was put into practice. While all of these trees may be needed for retail orders, I shall be glad to quote quantity prices on them while they last. Those wishing to plant nut orchards now should take advantage of the situation and plant their pecan orchards. Unless conditions change, these trees will probably not be grown in quantity hereafter, and in any case, it will take several years to work up a stock of them again, and those planting now can consider themselves fortunate in getting the trees to say nothing of the time gained in earliest planting.

Are Grafted Northern Nut Trees Appreciated?

It is only in the last few years that people in the northern states have begun to wake up to the advantages offered in the grafted nut trees and to appreciate what I have been giving them. This is due to the trees coming into bearing generally over the country. The seedling fellows are of course still on the job, but they are having much "harder sledding" than formerly, and with thousands of my grafted trees coming into bearing now and proving their superiority in every way, the decreasing demand for seedling trees will soon discourage the growing of these trees and they will be discontinued, just as happened with the pecan in the south and the English walnut in the west. Any nurseryman offering seedling pecan trees in the south or seedling English walnut trees in the west at the present time, would not only find no market for his product but would be held up to ridicule. This, when only a few years ago, seedling trees were advocated and largely planted. Even after grafted or budded trees were available in quantity many people listened to the seedling fellows who made extravagant claims for their trees, and planted seedlings, and the nurserymen growing these trees "died hard", after putting up a big fight in their defense, as these seedling trees, costing comparatively little to grow, were very profitable.

Being one of the original propagators of the pecan in the south and the first extensive propagator of these trees, both north and south, I am familiar with the development of the industry. The rapid development of the pecan industry and the profits now being derived from good orchards of budded or grafted trees, is a matter of common knowledge and it is needless for me to dwell upon that, but I am naturally proud of the part I contributed to its development. A few seedling fellows are still growing and selling seedling nut trees in the northern section but under variety names or otherwise trying to make the buyer think he is getting grafted or budded trees, and I would warn those buying nut trees to be sure they are getting grafted or budded trees of approved varieties before placing their orders.

Soil, Locations and Climatological Data

Some people seem to think that to succeed with nut trees requires some particular kind of soils or location. The fact is, most of the nut bearing trees are less exacting in their soil and climatic requirements than are our more common fruit trees, and these trees will often succeed where fruit trees would fail. This is especially true of the black walnut, heart nut and pecan. These trees are doing well in many cases on the heavy black soils of Ind., Ill., Iowa, Mo., and Kans., where few fruit trees can be grown, also on a great variety of soils, including light sandy soils, if the fertility of the soil is kept up.

THE BLACK WALNUT grows naturally from Canada to Florida, and from Maine to the Great Divide, and on about all kinds of soils and locations. The climate of Colorado is especially trying on trees but the black walnut is doing well there. My grafted trees are also doing well in Washington and Oregon.

THE HEART NUT is a sport or variation from the Japanese walnut, *juglans sieboldii*. The tree is very hardy and does well from Canada to Florida, and it is believed it will do well anywhere the black walnut grows.

THE NORTHERN PECANS are as hardy as the other hickories and in this regard should not be confused with the southern pecan. In a wild or natural state, the pecan grows from Terre Haute, Ind., and Clinton, Iowa, to the north, to the Gulf Coast on the south. The tree grows in the river bottoms and will succeed on land that is too low and damp for most trees. Because of this, it was formerly thought that the tree required excessive moisture for success, but this was long ago disproven by the thousands of trees growing thriftily and bearing well on high and dry locations, and on a wide range of soils. The pecan has proven to do well on even light sandy soil, if the soil fertility is kept up, as well as on the clay and clay loam soils. The varieties I am propagating are from Indiana, Iowa and Mo. and the trees are perfectly hardy.

THE ENGLISH WALNUT, when budded or grafted upon the native black walnut or other hardy stocks, ripen their wood growth up earlier and better than do seedling trees and are therefore considerably hardier than seedling trees. Grafted on this stock, the tree is also adapted to a wider range of soils, but the tree is more exacting in its climatic requirements than is the black walnut or other native nuts. While the English walnut can be grown with more or less success in all the eastern, middle and southern states, (and I have good reports on both the growth and bearing from all these states) my opinion is that its cultural range for commercial orcharding will follow that of the sweet cherry in the eastern and northern states, and where the sweet cherry (Hearts and Bigarreus) succeed, one need have no hesitation in making large plantings of my hardy budded and grafted trees. These trees are doing well in the lake region, from New York to Michigan; also in Mass. and Conn., as well as farther south, and mature their nuts well in the short seasons of these northern states, but on the heavy black lands from southern Indiana westward, their success is irregular and uncertain. The trees are doing well in Kentucky and in the Ozark mountains in Mo. and Ark. and should do well in Okla. Contrary to my earlier expectations, my grafted varieties of the English walnut are doing well in S. C., Ga., and Ala. and it is believed the hardy, late vegetating, Mayette and Franquette will prove to be a profitable commercial proposition in these states.

THE HYBRID HICKORY, Beaver, Laney, Fairbanks and Siers, being hybrids of the shagbark and bitternut, adapt themselves easily to a great variety of soils and climatic conditions. The bitternut hickory, one of the parents, is the most widely distributed of all our hickories according to Dr. Sargent of the Arnold Arboretum, and he says it is found growing naturally from the St. Lawrence River on the north to Florida on the south and westward to northeastern Nebraska, Oklahoma and Texas. The pure shagbark is strictly a northern species and does not grow very far south except along the mountain ranges, but these hybrids should succeed well into the Cotton Belt at least, if not to the Gulf Coast.

THE EUROPEAN FILBERT can be grown any where the English walnut succeeds except that it is not a reliable cropper very far south, according to data available. The filbert must be trained to tree form for best results and several varieties planted together, as no single variety has proven self pollinating.

THE RUSH HAZEL, being a native species, should succeed any where the wild hazel grows, which is over a large part of the U. S. and includes all the eastern, western and northern states, at least east of the Rockies.

THE NATIVE PERSIMMON is of very wide natural distribution also and the grafted varieties that I am growing are doing fine here, as well as westward in Iowa and Nebraska. This is considered a southern fruit, but it grows in a wild or natural state as far north as Pennsylvania, Illinois and Southern Iowa, and the varieties I am propagating here will doubtless succeed considerably farther north.

Yields and Profit

I am sometimes asked what a pecan, English or black walnut tree will produce at a given age. No one can tell what any certain tree or trees will bear at a given age, because conditions are too varied, but we can estimate the crop in a general way. Good budded or grafted trees of good bearing varieties of these nuts, when properly planted and cared for till the trees are well established, will begin bearing about as early as the apple and should produce profitable crops as soon as the trees are large enough to carry good crops of nuts. On rich land, this should be about as early as the apple.

It is conservatively estimated that if one plant, say, 1000 good budded or grafted trees of the pecan, English or black walnut, (or some of each) and give the trees proper care till established, that they will return a net profit of at least \$3000.00 a year at 10 to 12 years of age and the yield will increase rapidly with the growth of the trees and should reach at least \$10,000 a year when the trees are in good bearing. If the nuts are cracked and the kernels marketed, the income should be considerably larger than this. It is felt that the above estimate is very conservative, and I believe that this is so, as I know several trees the crop of which sells for \$100.00 or more in a single year. Estimating an orchard on the basis of these trees, (and there is no good reason why we can't duplicate them or even beat them) profits would be very large, as the cost of growing is practically nothing, and the nuts, falling to the ground when ripe, are easily and cheaply gathered and are not perishable, but may be sold as they come from the trees or they may be cracked and the kernels sold at one's leisure, during the fall and winter months. Every year sees a large increase in the quantity of nuts cracked, and eventually they will be sold that way almost entirely. The average person will not eat very many nuts if they have to crack them, but if they are cracked and put on the market in a readily usable form, the demand will be practically unlimited. Remarkably efficient power crackers have been invented and are now in use cracking pecans, and it is believed that just as good ones will be devised for cracking good black walnuts and other nuts as soon as we have them in sufficient quantity to justify the manufacture of such machines. Eventually, nut crackeries will be in operation all over the country and those having a few hundred pounds of nuts or those who prefer to sell their product as they come from the trees, can dispose of their product readily and without the trouble of bagging and shipping them.

Some people, in investigating the possibilities in growing nuts, compare production and sales per acre with those of the best apple or peach orchards. Unless one knows what the fruit grower is up against in his fight with insect pests and diseases, the comparison is not a fair one. It is not what a crop sells for that determines the profit or the satisfaction of growing. With half the gross sales per acre, a nut orchard might show more net profit, and the crop is certainly more satisfactory to grow and handle. Also, the nut trees require comparatively little care or attention and are permanent, outliving several generations of fruit trees. When fruit is low in price, the fruit grower must go ahead with the necessary spraying, pruning, cultivation and thinning of the fruit, even though returns do not justify the expense, because if left to shift for themselves, fruit orchards are soon gone and the investment is lost. On the other hand, nut orchards, while the trees respond to manuring or added soil fertility, in increased growth and bearing, the trees will go along in good shape without, and if the land on which they are growing is naturally rich or has been previously made so by manuring or the growing of leguminous crops, the trees will continue to bear good crops of nuts without any further attention to soil fertility, at least for a number of years.

Mr. E. A. Riehl, the noted Illinois nut and fruit grower, has a number of Thomas black walnut trees in bearing and wrote me in Dec. 1915 that he had sold all of his Thomas kernels at 80c per lb. wholesale, and as he got 10 lbs. of kernels to the bushel of nuts, he considered their growing very profitable. Later, Mr. Riehl wrote me that if he was a younger man he would plant at least 1000 grafted Thomas black walnut trees.



Pecan Nut cluster, natural size, grown here.

My Pecan Trees Are Making Good!

The cut next page shows a partial view of my test orchard here, trees 5 to 7 years old. The cut above shows a nut cluster from one of these young trees natural size.

Visitors here the past summer and fall were delighted with these trees and the fine clusters of nuts they were bearing, some of them asking why I had not urged more strongly the planting of these trees. My answer was that I had been doing this since 1912, but that most people were "From Missouri and had to be shown"! My grafted pecans are bearing and making good as far north as Aurora, N. Y.



View in my Pecan orchard here. Trees 5 to 7 years old.

BUTTERICK. From near Grayville, Ill. The old Butterick tree is one of the "giants," and has been bearing beyond the memory of the oldest inhabitants. The nut is one of the largest of the Indiana group and a real paper-shell of excellent quality. The original tree is a heavy and regular bearer. The Butterick combines large size, with a real paper-shell nut of high quality, and a rapid growing tree that bears very early, and is perhaps the best all round pecan of the Indiana group.

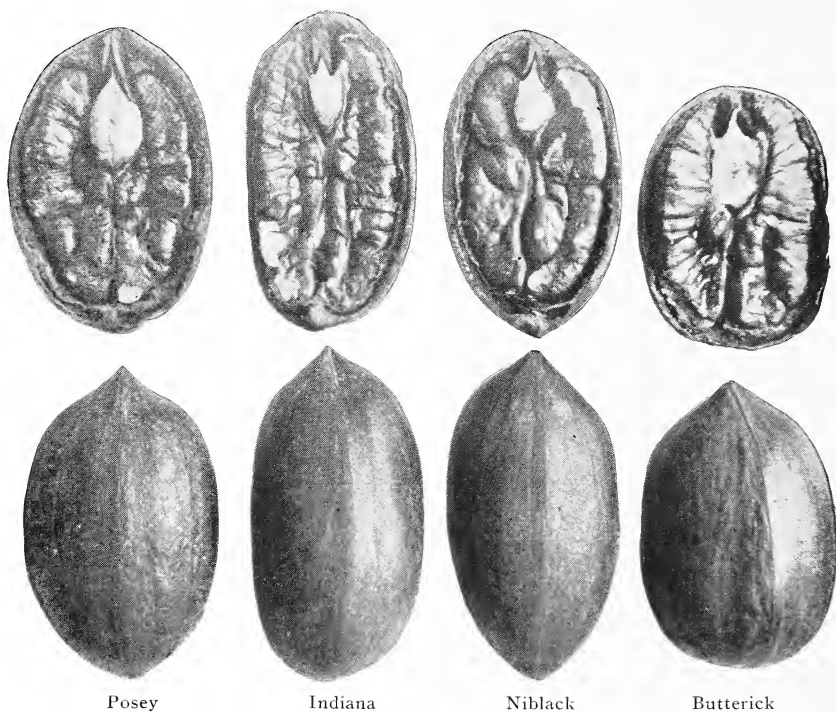
GREENRIVER. Originated in Henderson Co., Ky. The nut is medium size; shell thin; kernel full and plump and of the best quality.

INDIANA. From Knox Co., Ind. One of the largest of the Indiana pecans and one of the best. The nut is thin shelled, full meated and of very good quality. The tree is a very heavy bearer. One of the best pecans.

MARQUARDT. The Marquardt is perhaps the finest variety of the pecan-shellbark hybrids and, originating in Iowa, the tree is very hardy. The tree is a very rapid grower and very ornamental, and will succeed under neglect where most trees would fail. The nut, which is large and long, resembles the pecan more closely and is thin shelled and a good cracker. The kernel is very large, plump and the blending of the pecan-hickory flavor gives it a distinct and very delightful flavor. I can recommend this variety very highly for general planting.

NIBLACK. Originated in Knox Co., Ind. Named for Hon. Mason J. Niblack, Vincennes, Ind. Nut medium to large; shell very thin; kernel full and plump and of the very best quality. Cracking quality the very best.

POSEY. From Gibson Co., Ind. One of the largest and finest pecans of this group. The nut is very large and a real paper-shell. The cracking quality is the very best. The tree has very large foliage and is very ornamental.



PRICES OF PECAN TREES	1½ to 2 feet	\$1.75 each or \$17.50 per dozen.
	2 to 3 feet	2.00 each or 20.00 per dozen.
	3 to 4 feet	2.25 each or 22.50 per dozen.
	4 to 5 feet	2.50 each or 25.00 per dozen.
	5 to 6 feet	2.75 each or 27.50 per dozen.
	6 to 7 feet	3.00 each or 30.00 per dozen.

The American Hazel

RUSH. This is the first prize hazel of the Nut Growers' Association and is believed to be the finest in the U. S. My offer of \$50.00 for a better one, now out-standing several years and well advertised by the Association, has failed to bring forth a variety any where near its equal.

Unlike the ordinary hazel, the Rush makes a large bush or small tree 20 feet tall, and 16 or 18 feet spread and, as it bears all it can carry every year, it has great capacity for producing nuts. Here, at least, the bush is an infallible bearer, bearing big crops every year regardless of weather conditions.

The nut, which is very large for a hazel, is very thin shelled, full meated and of excellent quality. The Rush is hard to propagate and the supply of plants very limited.

Transplanted bushes first size \$3.00, Second size \$2.50.

MERIBROOKE. Originated by Robert T. Morris, the noted lecturer and writer and author of the new book, "Nut Growing". This is the regular bush form of the native hazel, but a very fine nut. Being dwarfish, this can be planted in the shrubbery or in odd nooks or corners where larger growing bushes could not be used.

Transplanted bushes, \$1.50 and \$2.00 each.

The American Black Walnut



Grafted Black Walnut Tree Bearing Seven Nuts 17 Months after the Tree was Grafted

OHIO. From Northern Ohio, named and introduced by me. Nut medium to large; shell thin; kernel full of good quality. An excellent cracking nut, and the halves of the kernels can be removed entire in most cases. Tree a good grower and very early bearer.

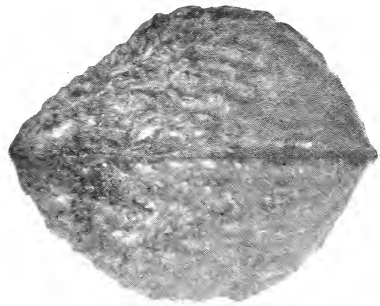
STABLER. Originated in Md. One of the finest black walnuts and the best of all in cracking quality, the kernels being easily removed in halves. Nut medium size; shell thin; kernel full; rich, and of fine quality. A remarkably fine black walnut.

PRICES BLACK WALNUT TREES BUDDED OR GRAFTED

1 to 2 feet	\$1.75, dozen	\$17.50
2 to 3 feet	2.00, dozen	20.00
3 to 4 feet	2.25, dozen	22.50
4 to 5 feet	2.50, dozen	25.00
5 to 6 feet	2.75, dozen	27.50
6 to 7 feet	3.00, dozen	30.00



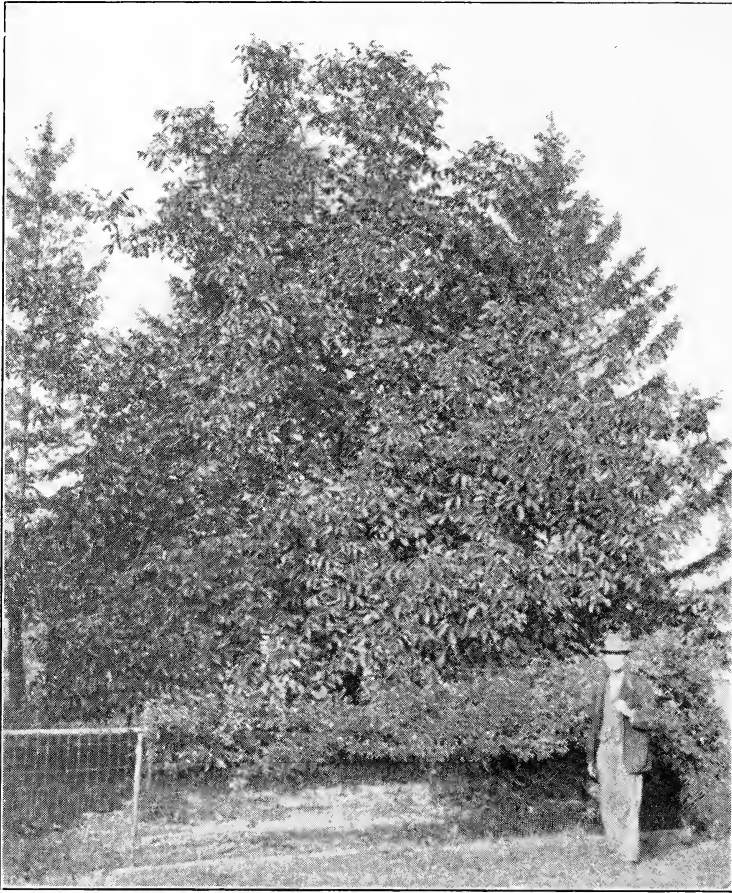
Ohio



Stabler

THOMAS. Originated with the late Jos. Thomas, King of Prussia, Pa. One of the finest black walnuts yet found and the best of all the large nuts in cracking quality. Nut very large; kernel large, light colored, and of very good quality. The tree is a wonderful grower, fully doubling the ordinary black walnut in growth.

TEN EYCK. Originated at So. Plainfield, N. J. The Ten Eyck is the thinnest shelled black walnut that we have. The nut is medium to large; kernel very full and plump and of very fine quality.



The above, from a photo, September, 1923, shows one of the 11 year English Walnut trees on the grounds of Mr. J. G. Rush. This tree bore three bushels of nuts.

My Hardy Grafted English Walnut Trees More Than Fulfilling My Claims!

These trees, in both handiness and performance, have more than fulfilled my earlier claims for them;—claims that not only critics but perhaps some of my good friends felt were extravagant.

When I made the statement that the Pacific Coast States had no monopoly on this nut; that it could and would, be produced just as cheaply and of just as good quality in the eastern states, "Doubting Thomas!" there were aplenty who were more than willing to give every one the "Horse Laugh" who was foolish enough to even think of growing English walnuts in the eastern or northern states. They said that the trees could not be hardy, that they were tender even in California, and that even should they prove hardy, the trees would bear only a few inferior nuts. I no longer have to argue my side of the case, the trees are doing it for me!

THE ILLUSTRATIONS OF ENGLISH WALNUT TREES SHOWN ON THIS AND THE PRECEDING PAGE will be of unusual interest to many of my older customers and friends. Mr. Rush was the first to plant my hardy grafted English walnut trees and, being a pioneer grower of these trees in the eastern or northern states, his success in growing these nuts has been an inspiration to all those interested in the development of the industry. I had not gotten out a catalogue with new illustrations showing any of these trees for several years and doubtless many people will be interested to know how the trees are performing. Mr. Rush's first planting was a few trees of the first variety propagated, bearing his name and named and introduced by me. These were planted in 1905. These trees are bearing heavily, as are also his later plantings, the limbs bending with the weight of the crop the past fall. Mr. Rush got 40 cents per pound for the bulk of his crop on the local market. The nuts ripen here considerably ahead of the western crop, giving them an advantage in the markets, whether the nuts are sold locally or shipped. My trees are making good records for themselves generally and I have not been able to supply the demand for the trees for several years.



Section of the tree, closer view, shown on the preceding page. This tree was very heavily loaded, practically every twig bearing a cluster of nuts, but it is impossible to show these up in a photograph as the nut husks and leaves are the same color. Mr. Rush, shown in the foreground, is in his 81st year. He is evidently pleased with the crop!

The English Walnut

FRANQUETTE. One of the finest and most reliable walnuts both east and west. The leading market variety in Oregon and Washington. Tree very hardy and reliable. The nut is medium to large; shell fairly thin and the cracking quality very good indeed. The Franquette is a very fine flavored nut and is free from the bitter tannin found in some walnuts. My trees are of the Vrooman strain which is much the best of this type.

MAYETTE. An extra fine nut and fortunately, a very hardy and reliable tree. Mayette is perhaps the largest nut with a thin shell and smooth and attractive that we have. The shell is thin and soft so that the nuts are easily cracked by crushing in the hand and the quality is the very best, the large, white kernel being free from the bitter tannin found in many nuts. My trees are of the Wiltz variety which is by far the most reliable of this type. This variety is doing fine here and elsewhere over the eastern U. S. and is one of the few sorts that is perfectly self pollinating. The very large catkins (staminate bloom) hang a long time and shed an abundance of pollen.

EASTERN VARIETIES: I am not at present propagating any eastern varieties of the English walnut. Mayette and Franquette have proven just as hardy and more reliable, and are the finest in point of nut of any walnuts known. These varieties vegetate late and are never caught by frost, while the eastern varieties that we have had under propagation lose an occasional crop from frost.

CHINESE ALPINE WALNUTS: These trees, grown from large, fine nuts gathered especially for me by the Kinsan Arboretum, in the Mountains of North China, are the hardest type of the so-called English or Persian walnut. The nuts sent me were very fine and I am anxious to see as many trees brought into bearing as possible. Out of some of them very valuable new varieties, harder than any yet known, may be obtained. These trees are exceptionally stocky and thrifty. They were dug with the whole roots and very carefully transplanted and have the finest root systems ever seen on walnut trees. Every tree should grow and thrive. These run about 1½ feet tall. Prices, two year seedling trees as above \$1.00 each; \$10.00 per dozen.



Wiltz Mayette



Vrooman Franquette

Prices of English Walnut Trees Budded or Grafted:

1½	to 2 feet	\$1.75 each or \$17.50 per dozen
2	to 3 feet	2.00 each or 20.00 per dozen
3	to 4 feet	2.25 each or 22.50 per dozen.
4	to 5 feet	2.50 each or 25.00 per dozen.
5	to 6 feet	2.75 each or 27.50 per dozen.

The Shagbark Hickory

The pure shagbark, while one of the finest of our native nuts and unsurpassed in flavor, is of such slow growth and takes so long to come into bearing that few people can be interested in planting it.

The following varieties are hybrids or crosses of the shagbark and the bitternut. Contrary to what one might naturally expect, the hybrids of these two species of hickory produce nuts remarkably fine in every way. Remarkable as it may seem, these hybrids seem to have inherited all the good points of both species and eliminated their faults. Like the bitternut parent, the trees are very rapid growers and very ornamental. The nut, which has all the good quality of flavor of the shagbark, has in addition the thin, soft shell of the bitternut. Many people have tested these nuts here the past two or three years and they have been practically unanimous in saying that the flavor of the nuts was extra fine. Many saying they were the finest shagbarks they ever ate. With all these good qualities, the trees bear very quickly, many of my grafts bearing nuts the third year and five or six year trees bearing excellent crops.

BEAVER. Originated in central Pennsylvania. The Beaver is one of the finest of this type and a very beautiful tree. The tree bears quickly and is very prolific. Perhaps the best of all these hybrids.

FAIRBANKS. From east central Iowa. One of the best of the type and very prolific. Tree very hardy and ripens its crop very early here.

LANEY. Named by Dr. Sargent for the Superintendent of the Rochester Parks, Mr. C. C. Laney. The original tree stands in the Rochester Parks and is a remarkably fine specimen. The nut has a very thin shell, nut full meated, and of excellent quality.

SIERS. Originated in Kentucky. This is a hybrid of the Mocker nut and bitternut, but is equal to any of the above hybrids and is a very remarkable nut in every respect. The Siers should be of particular interest to Botanists. So far as I know no other tree of this parentage has been found.

Grafted trees of the above four varieties 1 to 2 feet, \$2.00 each; 2 to 3 feet, \$2.25 each; 3 to 4 feet, \$2.50 each; 4 to 5 feet, \$2.75 each, and 5 to 6 feet, \$3.00 each.

The European Filbert

My test orchard here of over 30 varieties of filberts is very interesting. Some of the varieties are bearing good crops of fine nuts. Plant two or three varieties together to insure pollination.

BARCELLONA. A very large, round nut. One of the best and most reliable.

KENTISH COB OR ENGLISH. A fine large nut and one of the most reliable.

AVELINE. Nut rather small; exquisite flavor. Fine for home use.

Layered plants	1-2 feet,	\$1.00 each;	dozen,	\$10.00.	Transplanted,	\$1.50 each.
"	" 2-3	" 1.25	"	" 12.50	"	1.75
"	" 3-4	" 1.50	"	" 15.00	"	2.00

Larger, bearing bushes, \$2.50 and \$3.00 each.

The Native Persimmon

This is a fruit and not a nut but the tree is hard to propagate and is therefore not grown by nurserymen generally. This fruit is thought by some to be adapted to the south only. It grows in a wild or natural state as far north as Central Pennsylvania, Illinois, Indiana, Missouri and Iowa. The grafted varieties are doing fine here and in east central Iowa and will no doubt succeed considerably farther north. The persimmon is the surest cropper of all fruits, bearing full crops every year. The tree will thrive on land too poor for most trees and needs no attention whatsoever, after the trees are established, in any location. The tree has few or no insect enemies and

should be more largely grown. When allowed to ripen on the tree, the fruit is very sweet, rich and of excellent quality. Simply packed down in sugar the fruit keeps for months in excellent condition.

EARLY GOLDEN. A very early sort and of special value for market. Mr. E. A. Riehl stated several years ago that the Early Golden persimmon was the most profitable fruit that he grew. He sent them to the St. Louis market. A safe variety to plant farther north.

JOSEPHINE. A fine fruit and productive tree. Does fine here.

LAMBERT. From Hiawatha, Kans. The largest fruited native persimmon that I have seen. The fruit is very large, yet of high color and excellent quality. Does fine here. The most rapid growing and the tallest tree of all. Foliage very large and the tree very ornamental.

Fine trees 5 to 7 feet, \$2.00 each; \$20.00 per dozen.

4 to 5	"	1.75	"	17.50	"	"
3 to 4	"	1.50	"	15.00	"	"

The Heart Nut

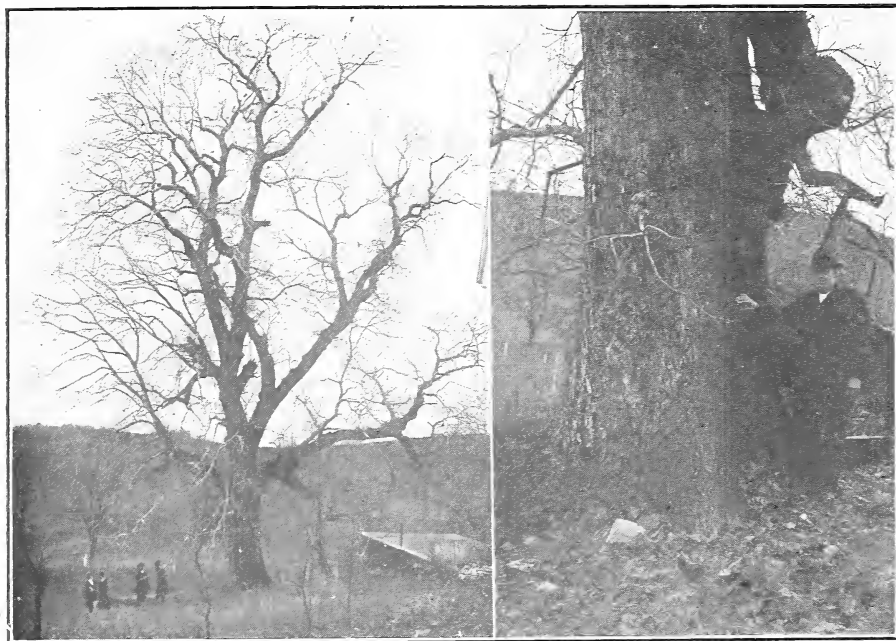
For the season of 1923-24 I had only a few hundred heart nut trees and these were all sold fall 1923.

This is one of the most difficult to propagate and I shall probably have no trees to offer before 1925.

How to Succeed with Nut Trees

Because we see the black walnut, the pecan and the hickories growing in a wild or natural state, and occasionally bearing good crops of nuts, under adverse conditions, some people seem to think that these trees do not require any care or attention. While this is true as regards the trees when established, at least if they are planted on good land, the young trees should have some attention till they are established. When the trees are poorly planted on old, worn out land, and left to shift for themselves, failure will be the result, and the same is true of any other tree or trees. The principal requirements for success with nut trees is soil fertility. The nut tree is a natural engine of production and, with the help of sunlight and moisture, can turn the crude soil salts and fertility into a finished and highly concentrated food product, but we cannot expect the tree to produce large or regular crops unless the soil fertility is kept up, any more than we can expect the gas engine to run without gas or oil. However, it is not necessary or even advisable to delay the planting of the nut orchard because the land to be planted is not fertile. By using some good fertilizer such as bone meal or tankage, mixed with the soil around the roots in planting the trees, we can supply the fertility necessary for good tree growth at once, and very cheaply, as two or three quarts of this material is sufficient for average size trees, and by mulching the ground lightly around the trees with stable manure, grass, straw, leaves or other material, sufficient moisture can be maintained for good tree growth without cultivating the land. This annual mulch, rotting on the surface, quickly builds up the soil about the tree, and by growing Sweet Clover or other legumes the land can be built up to a high state of fertility with very little expense and while the trees are growing. Nut trees do not require cultivation and, being planted 40 to 50 feet apart, in orchard form, the young trees use only a small portion of the area for several years, and this gives ample time and opportunity to build up the soil in a natural way, and at the same time no time is lost in bringing the orchard forward. When these trees are planted on good farm land, one can continue to crop the land for several years if desired, and the distance given the nut trees in orchard form makes them little in the way of cultivating farm or truck crops for several years.

I mention Sweet Clover especially in connection with soil improvement, because, in my experience, it is the only legume that does well on old worn out or gullied fields. Sweet Clover is really a wonderful plant, as it not only takes well on poor, worn soils, but it will grow 6 or 8 feet tall. The unhulled seed is the best to use. We sow this at the rate of one-half bushel to the acre, right on the hard ground, without any preparation whatever, with excellent results.



The above is from a photo of an English Walnut tree growing on the farm of Jacob Bauder, Berks Co., Pa. This tree is 210 years old; the trunk measures 15 feet in circumference three feet above the ground; spread 92 feet and 100 feet high. An idea may be had of its size from the men under it to the left. Mr. Bauder says this tree has produced 25 bushels of nuts in a single crop. Timber men who have looked at it recently say it is probably worth \$500 for lumber for the manufacture of fine circassian walnut furniture.

WYCKOFFS GRAND VIEW POULTRY FARMS

Special Breeders of the Acknowledged World's Greatest Laying Strain
of the White Leghorn

Aurora, N. Y., January 10th, 1924.

Dear Mr. Jones:

"I am sending you two photos of trees that I think make quite a satisfactory showing.

The "close-up" of the individual tree showing "yours truly" standing by the side of it is a remarkable specimen for eight years, but we have many others just as good.

Aside from the value of these trees in producing the most delicious nuts, they are the most satisfactory shade trees that one could imagine for the poultry yard, producing a dense, cool shade that the fowls more than appreciate during the hot summer weather. While ordinary fruit trees give scanty shade and a long severe drought reduces the foliage to such an extent that they are almost useless, dry, hot weather has little or no effect upon the deep rooted nut trees.

The beautiful English walnut trees that we already have growing nicely have added thousands of dollars to the value of our farm. Visitors to the farm are greatly attracted and interested in these trees. So few people know or realize that these nuts will grow and do well anywhere the peach will live.

I am more than glad to be of service to you at any time and I hope the enclosed photos will be of interest.

Signed: E. L. WYCKOFF.

Planting and Care of Nut Trees

It is important that nut trees be handled and planted carefully to get the best results. Keep the roots moist and expose as little as possible to sun or wind in handling. The holes should be dug amply wide to accommodate the roots and a few inches deeper than the roots are long. No manure or other coarse material should be used in the holes about the roots. A few handfuls of bone meal or tankage, mixed with the soil about the roots, will do no harm and will give good results. Only good top soil should be used in filling the holes, and this must be well firmed about the roots, while the tree is being planted by tamping with the spade or shovel handle or a tamping stick with a smooth, rounded end, that will allow the earth to be well tamped and at the same time, not bruise the roots. Most failures in transplanting are due to the planter not firming the earth well about the roots of the tree or from using water in the holes as the trees are being planted. If water is used and the soil handled while wet, it will harden and shrink away from the roots in drying. For the same reason, trees should never be planted soon after a heavy rain, or at any time when the ground is very wet. If trees arrive when the ground is very wet, heel them in or put in the cellar till the ground is in condition to plant. If the ground is dry, so much the better for planting, and trees may be watered after they are planted. Remove a shovel of earth on two sides of the tree, and a foot or more away; fill the holes with water and after this has soaked in, put the dirt back, leaving a loose mulch on top. If the clay is thrown out and away from the holes, and only top soil used in filling the holes,—taking this top soil from a circle surrounding the tree, when the tree is planted, it will be surrounded by a depression or basin a few inches below the surface level. This is a decided advantage, with such trees as the pecan, walnut and persimmon, as I have found by several years experience. These trees may be planted this way either spring or fall, and on any land not naturally wet. Trees planted in this way not only live better, but grow much faster, as the basin about the tree gathers both moisture and fertility during rains, and is eventually filled up with the most fertile soil. This method of planting is especially desirable where trees are to be grown without cultivation. It is possible, by this method of planting, supplemented with an annual mulch, to grow vigorous trees and profitable orchards easily and cheaply on rough, cheap land, that would be quickly ruined by erosion, if cultivated. By sowing sweet clover or other strong growing legumes, a plentiful supply of mulching material can be grown right where it is needed, and at the same time, the land improved and built up.

NUT TREES MUST HAVE THE TOPS REDUCED or cut back, either before or after planting. This forces an early and stronger growth and induces the formation of new feeding roots and the tree is well established in its new location much sooner. If the top over-balances the root system to any appreciable extent, the over-taxed roots will simply become exhausted and no new roots will form, with the result, that even though the tree may live, it will linger along several years before getting started. The top should be reduced one-half or two-thirds depending upon the size of the tree and its root system.

TRAINING THE TREES. A four or five foot tree, when cut back to two feet, will usually throw out several strong shoots, and this is just what is wanted. These shoots, being low, induce a quicker and stronger root formation and a sturdier tree. The head of the tree will not be wanted so low, but all growth should be allowed to remain until the tree is well established. The most vigorous shoot may then be selected and trained to form the future tree. This can be trained up-right, by tying to a stake where necessary. The tree should become well established in its new location by the end of the second growing season, when the surplus shoots may be removed and all of the sap thrown into the shoot selected to form the tree.

Full Direction for Planting Sent With all Shipments.

What Others Say

The following letters or extracts were taken from a long list of letters received during the past two or three years. *Not a single letter or testimonial has ever been solicited.*

Canada

"I have an English walnut tree, Mayette, planted four years ago, that has come through two very severe winters uninjured. The one of 1919, 35 below zero. It is a little larger than the one shown on page 6 of your 1921 catalogue."

David Moyle, Toronto, Canada.

"Since writing you I am pleased to state that I have located some fine hickory trees in Norfolk County, Ontario. I am sending you two or three of the nuts for examination. . . . I have also located two or three parties who have grown filberts successfully at St. Williams and Port Huron, and I am informed that there is quite a large grove of filberts near Hamilton. You will also be interested to learn that I have located five pecan trees near Richmond Hill, which is about fifteen miles north of Toronto. The largest of these trees is about 35 feet tall and has a trunk diameter of about 16 inches. They have borne quite a lot of nuts, but these usually do not mature. In 1919, however, a very good crop of matured nuts was produced. It is very interesting to me to know that these trees will grow in Ontario, to say nothing of fruiting. . . . I am also sending you sample of a new heart nut I have discovered near Aldershot, Ontario, and a few of the above-mentioned filberts."

J. A. Neilson, Guelph, Canada.
Lecturer in Horticulture, Ontario Agricultural College.

"I am writing you in regard to some more nut trees and thought I would tell you that I went to St. Catharines and saw the Franquette walnut tree. It had a great crop on it. I got some grafts in the spring and put on about a dozen grafts, but did not succeed in getting any to grow. Also got some buds, but the tree was so loaded with nuts that I could hardly get any buds."

Will Ellis, Niagara Falls, Canada.

"This stands on a lot at 251 Queenstown Street, St. Catharines, Canada. It is estimated to be 15 years of age or older. It has the reputation of being a heavy annual bearer. Its crop of 1911 is given by Miss Berger as 200 pounds. The nuts are of medium size, thin shelled, and the kernels of good quality. From notes on the 'Ontario' walnut taken by Mr. C. A. Reed, Nut Culturist, United States Department of Agriculture, on one of his trips to Canada."

Washington, D. C.

Colorado

"As a native of New York State the first twenty years of my life, I am well acquainted with the nuts native to that State. Out of all these, the only nut grown here is the black walnut. It does very fine in this section and fruits abundantly. With good soil, plenty of water, winters milder than New York State, I cannot see why many other nut trees should not do well here. So far as I can find out they have not been tried."

C. L. Cudebeck, Boulder, Colo.

"Since writing to you I have located two sturdy English walnut trees in the city of Denver. They are about 25 feet tall, but could not get any information on their bearing, as they are in a neighborhood where people are moving quite often. I met one man who said he had seen the trees loaded with nuts."

W. J. Blackham, Denver, Colo.

"I know one English walnut tree in Denver grown from seed and there is no doubt that they will grow here. The advice should be to those planting trees in this and other dry climates is to water trees well, particularly during the fall months so that trees go into winter with lots of moisture about the roots."

C. J. Helber, Wabash Railway Co., Denver, Colo.

Illinois

"The heart nut tree from you bore nuts last season the second year after setting."

Dr. G. N. Gilbert, Pana, Ill.

"You never know what you can raise on this rich Pike County soil until you try. John Dean brought to this office one day last week a collection of the products of his little fruit farm that was of unusual interest. In the collection were some fine large persimmons, pecans, and butternuts, but perhaps the most interesting were some English walnuts picked from a tree growing on his farm."

Pike County News, Pike County, Ill.

Indiana

"I have two seedling pecan trees which bore the last two seasons. The nuts were fully matured but small in size."

Moody Breneman, Berne, Ind. (60 miles north of Indianapolis.)

Kansas

"I have a couple of heart nut trees that I got of you two years ago that are doing fine and last spring had bloom on, but the Easter freeze that killed all our fruit got these also. I also have a Mayette walnut from you doing nicely and I hope to have good results from it, but I expect the surest proposition is the black walnut."

S. L. Bishop, Conway Springs, Kan.

"I just returned from the meeting of the Kansas Horticultural Society. One man showed some very fine Thomas walnuts and some seedling pecans grown on the north line of this state."

Jas. Sharpe, Council Groves, Kansas.

Michigan

"One of the Thomas walnut trees I got from you three years ago bore a dozen nice nuts this fall. I am considering planting seventy acres to nut trees."

A. W. Copeland, Birmingham, Mich.

"My brother-in-law, Samuel Lyons, has a farm with many native black walnut trees on it. He says it is the only tree that you can plant right up to and not be bothered with roots. It is the only tree that stock will not injure by stamping around; and it is the only tree you can raise good farm crops under. A maple, for instance, will absorb all the moisture and nutriment of the soil for several rods around the tree, so that crops are a failure, but he gets his (dried) grain right under the walnut trees."

Arthur Drew, Howell, Mich.

Minnesota

"You will remember I had trouble with the first hickories I purchased of you with regard to their hardiness. You told me that I had not planted the trees correctly and that I could improve their hardiness by removing a little earth from around the trunk of the trees in the early fall. You told me also that the hybrid hickories would prove to be one of the hardest of the nut trees all of which have demonstrated to myself to be true after acting upon your suggestion."

Carl Weschcke, St. Paul, Minn.

"Of the several nut trees purchased of you three years ago the Japanese heart nut and Thomas walnut have made a splendid growth. The shagbark hickory has made a fair growth, although it suffered from winter injury the first winter."

P. A. Brooks, Minneapolis, Minn.

Missouri

"Your letter in which you quote a pecan tree received. I much prefer an English walnut tree. I have one about 20 feet tall 30 feet north of where I want to plant this one and think the two would look better if both of the same kind."

C. H. Payson, Macon, Mo.

New Jersey

"There are a good many fine English walnut trees in this locality and some of the largest trees bear twelve bushels a year of good nuts."

Jacob E. Brown, Ber, Salem County, N. J.

"I am sending you some nuts for identification. They grew on a tree that you produced and sold to a friend of mine in Greenwich, N. J. They are much pleased with the tree."

J. Russell Smith, Swarthmore, Pa.

Note.—The above were Indiana pecans and were well filled and of good size. The tree is six years old and was a small tree when planted.

"We have an English walnut tree that seems a wonder to all who see it. There was a man here from California a few days ago and we showed him some of the nuts. He said he never saw any to compare with it in California."

Mrs. Fred Grosscup, Bridgeton, N. J.

New York

"Near my home at Northport a friend has a fine English walnut tree that bears well every year. It passed through last winter with the thermometer down to eighteen below zero and bore a good crop last fall."

Victor F. Lecoq, New York City.

"The English walnut trees from you planted on our farm in the Lake Champlain Valley, North Eastern, N. Y., are still alive, though subjected to temperatures to twenty-five or more below zero several times during the winters. The largest one, a tree now about 20 feet in height with very dense foliage. The black walnuts, pecans and hickories have all lived and made a very good start. I am rather encouraged regarding the English walnut and now believe that they can be grown on the right kind of soils under our climatic conditions."

Clayton O. Smith, Berkeley, Cal.

Note.—Professor Smith is an authority on English walnuts in California, having written many excellent articles and bulletins on English walnut growing. His brother is in charge of the home farm near Willshire, N. Y.

"The nut trees that you sent to my place at Westhampton, L. I., a year ago last fall all lived and have done well. One of the English walnut trees grew 25 inches and the Japanese heart nut bore six nuts and would probably have produced many more had I not picked off all but two clusters of bloom."

Dr. Ralph Waldo, New York City.

North Dakota

"Between twenty-five and thirty bushels of black walnuts are expected to be picked from the single row of black walnut trees in the North Dakota Agricultural College experimental grove this year. Although few people have known it, this single line of walnut trees, planted from seed sixteen years ago, have been giving heavy yields of nuts the past four years. The trees this year are weighted down with the heavy clusters of nuts."

Information by A. Y. Yeager, Horticulturist, From Rural Weekly, St. Paul, Minn.

Ohio

"I have just gathered my first crop of fifty-seven Thomas walnuts from the tree I purchased from you in October, 1918. They are dandies. I feel pretty good over them."

C. W. Shoemaker, Waterville, Ohio.

"It may interest you to know that there are several bearing English walnut trees on an island in the Sandusky River, about fifteen miles west of here. I have not seen these trees, but several of my acquaintances have seen the trees and gathered nuts from them."

W. S. Davis, Bellevue, Ohio.

"About two years ago I got three trees from you. When I received these trees they looked like sticks, but I was surprised to see how they grew. I am enclosing two photos of the Rush walnut so you can see how it has grown."

Anthony W. Vehr, Cincinnati, Ohio.

Pennsylvania

"I was in Berks County to look up a farm and saw on one farm an English walnut tree at least three feet across the stump. This tree had thirteen bushels of nuts on it this year."

Harrison Roseberry, Muncy, Pa.

South Carolina

"My Rush walnut tree purchased from you is quite a large tree now and bore a good many nuts last year that were O. K., but, as I told you before, the Rush walnut vegetates too early here, causing the nuts to be killed by spring frosts some years. I believe the Mayette and Franquette will prove much better."

A. B. Sample, Greenwood, S. C.

Vermont

"I have bought many nut trees from you from time to time. Some of the grafted black walnut trees are bearing and I am thinking of grafting some of my common blacks to the improved sorts."

Zenas H. Ellis, Fairhaven, Vt.

Virginia

"It may interest you to know that there is an English walnut tree near here over thirty-five years old that bears several bushels of nuts each year."

H. S. Beckler, Staunton, Va.

"I know two English walnut trees in this section that are over 100 years old. One of these trees bears nuts of extra quality."

D. S. Harris, Williamsburg, Va.

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Washington, D. C.

Colorado

"As a native of New York State the first twenty years of my life, I am well acquainted with the nuts native to that State. Out of all these, the only nut grown here is the black walnut. It does very fine in this section and fruits abundantly. With good soil, plenty of water, winters milder than New York State, I cannot see why many other nut trees should not do well here. So far as I can find out they have not been tried."

C. L. Cudebeck. Boulder, Colo.

"Since writing to you I have located two sturdy English walnut trees in the city of Denver. They are about 25 feet tall, but could not get any information on their bearing, as they are in a neighborhood where people are moving quite often. I met one man who said he had seen the trees loaded with nuts."

W. J. Blackham. Denver, Colo.
"I know one English walnut tree in Denver grown from seed and there is no doubt that they will grow here. The advice should be to those planting trees in this and other dry climates is to water trees well, particularly during the fall months so that trees go into winter with lots of moisture about the roots."

C. J. Heiber, Wabash Railway Co. Denver, Colo.

Illinois

"The heart nut tree from you bore nuts last season the second year after setting."

Dr. G. N. Gilbert. Pana, Ill.

"You never know what you can raise on this rich Pike County soil until you try. John Dean brought to this office one day last week a collection of the products of his little fruit farm that was of unusual interest. In the collection were some fine large persimmons, pecans, and butternuts, but perhaps the most interesting were some English walnuts picked from a tree growing on his farm."

Pike County News, Pike County, Ill.

Indiana

"I have two seedling pecan trees which bore the last two seasons. The nuts were fully matured but small in size."

Moody Breneman. Berne, Ind. (60 miles north of Indianapolis.)

Kansas

"I have a couple of heart nut trees that I got of you two years ago that are doing fine and last spring had bloom on, but the Easter freeze that killed all our fruit got these also. I also have a Mayette walnut from you doing nicely and I hope to have good results from it, but I expect the surest proposition is the black walnut."

S. L. Bishop. Conway Springs, Kan.

"I just returned from the meeting of the Kansas Horticultural Society. One man showed some very fine Thomas walnuts and some seedling pecans grown on the north line of this state."

Jas. Sharpe. Council Groves, Kansas.

Michigan

"One of the Thomas walnut trees I got from you three years ago bore a dozen nice nuts this fall. I am considering planting seventy acres to nut trees."

A. W. Copeland. Birmingham, Mich.

"My brother-in-law, Samuel Lyons, has a farm with many native black walnut trees on it. He says it is the only tree that you can plant right up to and not be bothered with roots; it is the only tree that stock will not injure by stomping around; and it is the only tree you can raise good farm crops under. A maple, for instance, will absorb all the moisture and nutriment of the soil for several rods around the tree, so that crops are a failure, but he gets his finest grain right under the walnut trees."

Arthur Drew. Howell, Mich.

Minnesota

"You will remember I had trouble with the first hickories I purchased of you with regard to their hardiness. You told me that I had not planted the trees correctly and that I could improve their hardiness by removing a little earth from around the trunk of the trees in the early fall. You told me also that the hybrid hickories would prove to be one of the hardiest of the nut trees all of which have demonstrated to myself to be true after acting upon your suggestion."

Carl Weschke. St. Paul, Minn.

"Of the several nut trees purchased of you three years ago the Japanese heart nut and Thomas walnut have made a splendid growth. The shagbark hickory has made a fair growth, although it suffered from winter injury the first winter."

P. A. Brooks.

Minneapolis, Minn.

Missouri

"Your letter in which you quote a pecan tree received. I much prefer an English walnut tree. I have one about 24 feet tall 50 feet north of where I want to plant this one and think the two would look better if both of the same kind."

C. H. Payson.

Macon, Mo.

New Jersey

"There are a good many fine English walnut trees in this locality and some of the largest trees bear twelve bushels a year of good nuts."

Jacob E. Brown. New Salem County, N. J.

"I am sending you some nuts for identification. They grew on a tree that you produced and sold to a friend of mine in Greenwich, N. J. They are much pleased with the tree."

J. Russell Smith.

Swarthmore, Pa.

Note.—The above were Indiana pecans and were well filled and of good size. The tree is six years old and was a small tree when planted.

"We have an English walnut tree that seems a wonder to all who see it. There was a man here from California a few days ago and we showed him some of the nuts. He said he never saw any to compare with it in California."

Mrs. Fred Grosscup.

Bridgeton, N. J.

New York

"Near my home at Northport a friend has a fine English walnut tree that bears well every year. It passed through last winter with the thermometer down to eighteen below zero and bore a good crop last fall."

Victor F. Lecoq.

New York City.

"The English walnut trees from you planted on our farm in the Lake Champlain Valley, North Eastern, N. Y., are still alive, though subjected to temperatures to twenty-five or more below zero several times during the winters. The largest one, a tree now about 20 feet in height with very dense foliage. The black walnuts, pecans and hickories have all lived and made a very good start. I am rather encouraged regarding the English walnut and now believe that they can be grown on the right kind of soils under our climatic conditions."

Clayton O. Smith.

Berkeley, Cal.

Note.—Professor Smith is an authority on English walnuts in California, having written many excellent articles and bulletins on English walnut growing. His brother is in charge of the home farm near Willsboro, N. Y.

"The nut trees that you sent to my place at Westhampton, L. I., a year ago last fall all lived and have done well. One of the English walnut trees grew 29 inches and the Japanese heart nut bore six nuts and would probably have produced many more had I not picked off all but two clusters of bloom."

Dr. Ralph Waldo.

New York City.

North Dakota

"Between twenty-five and thirty bushels of black walnuts are expected to be picked from the single row of black walnut trees in the North Dakota Agricultural College experimental grove this year. Although few people have known it, this single line of walnut trees, planted from seed sixteen years ago, have been giving heavy yields of nuts the past four years. The trees this year are weighted down with the heavy clusters of nuts."

Information by A. Y. Yeager, Horticulturist. From Rural Weekly, St. Paul, Minn.

Ohio

"I have just gathered my first crop of fifty-seven Thomas walnuts from the tree I purchased from you in October, 1918. They are dandies. I feel pretty good over them."

C. W. Shoemaker.

Waterville, Ohio.

"I am very interested to know that there are several bearing English walnut trees on an island in the Sandusky River, about fifteen miles west of here. I have not seen these trees, but several of my acquaintances have seen the trees and gathered nuts from them."

W. S. Davis.

Bellevue, Ohio.

"About two years ago I got three trees from you. When I received these trees they looked like sickies, but I was surprised to see how they grew. I am enclosing two photos of the Rush walnut so you can see how it has grown."

Anthony W. Vehr.

Cincinnati, Ohio.

Pennsylvania

"I was in Berks County to look up a farm and saw on one farm an English walnut tree at least three feet across the stump. This tree had thirteen bushels of nuts on it this year."

Harrison Roseberry.

Muncy, Pa.

South Carolina

"My Rush walnut tree purchased from you is quite a large tree now and bore a good many nuts last year that were O. K., but, as I told you before, the Rush walnut vegetates too early here, causing the nuts to be killed by spring frosts some years. I believe the Mayette and Franquette will prove much better."

A. B. Sample.

Greenwood, S. C.

Vermont

"I have bought many nut trees from you from time to time. Some of the grafted black walnut trees are bearing and I am thinking of grafting some of my common blacks to the improved sorts."

Zenas H. Ellis.

Fairhaven, Vt.

Virginia

"It may interest you to know that there is an English walnut tree near here over thirty-five years old that bears several bushels of nuts each year."

H. S. Beckler.

Staunton, Va.

"I know two English walnut trees in this section that are over 100 years old. One of these trees bears nuts of extra quality."

D. S. Harris.

Williamsburg, Va.

UNSOLICITED TESTIMONIALS

West Grove, Pa., January 2nd, 1924.

Esteemed Friend:

"Will thee please send us another catalogue. We have one but it is an old one. We want to get some more Thomas walnut trees. We have two young trees and one had some nuts on and we are so pleased with them we want to get more trees, and so few nurserymen have them. They do not know what is good. We have plenty English walnuts. Had a lot of nuts this Autumn."

Signed E. Maule and Co.

Wrightstown, N. J., October 23rd, 1923.

"I bought a couple of English walnut trees two years ago. Could you spare me more this fall? They had nuts on this year and they are very nice."

Signed E. J. Bunting.

Union City, Mich., August 4th, 1923.

"I thought I would write and tell you about my success in growing nut trees. The trees that I bought of you are all coming along just fine. They all seem to stand the drought very well. Yesterday I answered a letter from the Research Corporation, Detroit, Mich., and told them about how the trees were doing for me and how they wintered here without any protection whatever. I told them what a great improvement grafted trees were over seedlings. A neighbor has a ten year seedling tree that has not borne a nut and is not much bigger than the trees I got from you two years ago."

Signed Harry Burgardt.

NOTE: Mr. Burgardt order was for English walnut and pecan trees.

Tenafly, N. J., February 26th, 1923.

"I think you will be interested to know that the trees which I purchased of you far excelled some nut trees which I purchased from another nursery. Your trees, although no more expensive, were sturdier and had a more compact and much better root system."

Signed Harry Collins.

Toledo, O.

"Less than fifty miles from Toledo is an English walnut tree that produces from five to ten bushels of nuts each season. This tree is said to be 40 to 50 years old. Near Oak Harbor is a grove of over one hundred trees bearing nicely."

Signed Nut Tree Committee, Orphanage Homes.

Sligo, Clarion Co., Pa., January 16th, 1924.

"I had two seedling English walnut trees that bore a few nuts the past season. It is thirteen years next spring since I planted these trees."

Signed J. W. Hartman.

NOTE: The above is included as showing conclusively that the English walnut is hardy in that section of Pennsylvania. Grafted trees are still harder than seedlings, and bear in one-third of the time required for seedling trees.

FOREIGN ORDERS: I have sent trees to China, British South Africa, Australia, New Zealand, etc., as well as to several European countries. I have several letters attesting to the good condition and subsequent growth of these trees, showing conclusively that these trees can be delivered in good condition in any part of the world.

